

ton, received at his own urgent request the last of these sheets. In 1932 the writer visited the type locality and collected a large number of duplicates which were later widely distributed; one of these was turned over to Mr. Otis. This was the beginning of a friendship that lasted until his death. Now that his entire herbarium of three thousand sheets has gone to the State College, it is to be hoped that the sheet collected by Mr. Otis will be placed with the main Otis collection.

During the location of the Olympic Loop Highway, Mr. Otis was stationed at the town of Forks and botanized as much as possible in his spare time, visiting Lake Ozette and neighboring parts of the Olympic Mountains. On these trips he found several plants not previously known to occur within the state. Among these are *Erythronium revolutum* Smith and *Plantago macrocarpa* Cham. & Schlecht.

On the Hoh River trail in western Jefferson County he collected grass specimens which Dr. St. John believed to represent an undescribed species of the genus *Glyceria*. No description was published, however, since Dr. St. John shortly after left the State College to accept a position at the University of Hawaii. The writer began exchanging specimens with Mr. Otis at about this time and acquired two sheets of the plant. Dr. A. S. Hitchcock was then working on the "Manual of Grasses" and one sheet of this material was sent to him. He promptly replied that it was undescribed and, accepting the writer's suggestion, duly published it as *Glyceria Otisii* (Amer. Journ. Bot. 21: 128. 1934).

All who knew Mr. Otis will agree that his method of doing things—arranging a plant for the press, mounting a specimen, writing a label, composing a letter—can be summed up neatly in the word "meticulous" in its broad and liberal meaning. It was a pleasure to talk with him, and especially to see the sparkle in his eye when he found the answer to some perplexing problem of identification. He was truly a man one does not forget.—J. WILLIAM THOMPSON, Cleveland High School, Seattle, Washington.

## REVIEWS

*The Leguminous Plants of Wisconsin.* By NORMAN C. FASSETT. Pp. viii + 157 with 24 plates and 97 text figures. Published by the University of Wisconsin Press. Madison. 1939. \$3.00.

This work is a detailed, profusely illustrated distributional and taxonomic study of the species of the family Leguminosae that occur in the state of Wisconsin. The discussion of each species is accompanied by a map of its known distribution. Separate keys prepared by the author are based upon flowers, fruits and seeds, and a key prepared by Cathrine Mose is based upon epidermal outgrowths. Illustrations are by Richard I. Evans.

From the distribution pattern of the various species the author

concludes that the Wisconsin species represent several floristic sources as to their origin. The largest element seems related to the southeastern woodland; the next largest group to the prairie floras. Most of these species find their northeastern or northwestern limit in Wisconsin. In addition there is a marine beach element occurring chiefly on the shores of the Great Lakes and elsewhere on the beaches of the Atlantic and Pacific oceans. One species is recorded as Arctic in origin and a few as very local in Wisconsin; only one strictly endemic species is recorded. Attempts at correlation with glacial history as well as with the edaphic problems of the state are made.

Such graphic presentations of the occurrence of species are sorely needed before intelligent conclusions can be drawn as to distributional problems. They present first the problems of presence and absence and point the way to investigation aimed to determine the adequacy of the data. The first question that comes to mind concerning a gap in distribution is whether or not the area has been adequately collected. There are already too many conclusions based upon inadequate collections. They present next, problems involving the causes of the distribution pattern. Comparisons of these maps with soil, climatic or geological maps can aid one in determining whether the controlling factor is climatic or edaphic, or whether it involves also complex geological and migrational history.

In glancing at the maps presented there is much that tempts speculation. On most of the maps a blank spot stands out that seems to one not familiar with the physical features of the region to call for explanation. This area which centers in Richland County and involves the adjacent portions of adjoining counties to the east, west and north, coincides with a portion of the driftless area. The location of rivers is well marked by collectors' localities. Again the question arises: is the river the agent of dispersal or only the highway of the collector? A general discussion of some of these problems in the light of the data presented would have been appreciated by the reader who is fully aware of the difficulties imposed upon the problem by a settled immaculate agriculture.

In general the author's ideas are clearly expressed and well presented. Details of description are clarified by good illustrations; the typography is excellent.—H. L. M.

*Flora of Riverside and Vicinity.* By ROSAMOND A. FAWCETT. Occasional Papers of Riverside Junior College, Volume IX, Number 1. Pp. 172 with three pages of line drawing and a map of Riverside County, California. Published by the Junior College, Riverside, California, April 1, 1939.

"Western Riverside County, to the east edge of the Coachella Valley, and a contiguous portion of San Bernardino County to